

Genome Gene Best Homologs

Find corresponding genes between a reference and a set of up to 50 query isolate genomes. Please note that this tool is for isolate genomes only. For metagenome analysis, please use **Phylogenetic Distribution** option under **Compare Genomes** menu.

In order to use this function, a user first selects a reference isolate genome (e.g., *Acidianus hospitalis*) and then selects between 1 and 50 query genomes (e.g., *Aciduliprofundum boonei* T469 and *Aciduliprofundum* sp. MAR08-339) for comparison. The user can also specify that the genes should not have homologs in a set of genomes to be excluded (e.g., adding *Caldisphaera lagunensis* DSM 15908 to the **Excluded Genomes** list). The default percent identity is set to 60% and the value can be changed in the **Percent Identity** drop down list (see Figure 1(ii)).

After the user clicks the **Submit** button, the **Genome Gene Best Homologs** result page (Figure 1(ii)) shows all genes in the reference genomes that have homolog genes with at least 60% identity in the reference genomes, and do not have homologs in the **Excluded Genomes**.

Genome Gene Best Homologs

Acidianus hospitalis W1

[Aciduliprofundum boonei T469](#)
[Aciduliprofundum sp. MAR08-339](#)

hint: Reference coordinates and query coordinates refer to the start and end positions of aligned regions in reference and query genes (rather than gene coordinates on chromosomes).

Filter column: Reference Gene ID Filter: text

Page 1 of 1 << first < prev 1 next > last >> All

Select	Reference Gene ID	Reference Gene Name	Reference Locus Tag	Reference Coordinates	Query Gene ID	Query Gene Name	Query Locus Tag	Query Coordinates	Query Genome	Percent Identity	Bit Score
<input type="checkbox"/>	650246868	30S ribosomal protein S11	Ahos_0662	8, 132	646649462	SSU ribosomal protein S11P	Aboo_1396	4, 128	Aciduliprofundum boonei T469	66.4	162
<input type="checkbox"/>	650246868	30S ribosomal protein S11	Ahos_0662	8, 132	2509055352	SSU ribosomal protein S11P	AcM339_1558	4, 128	Aciduliprofundum sp. MAR08-339	67.2	164
<input type="checkbox"/>	650246924	SSU ribosomal protein S12P	Ahos_0743	8, 146	646648112	SSU ribosomal protein S12P	Aboo_0070	4, 142	Aciduliprofundum boonei T469	73.4	216
<input type="checkbox"/>	650246924	SSU ribosomal protein S12P	Ahos_0743	8, 146	2509054775	SSU ribosomal protein S12P	AcM339_0901	4, 142	Aciduliprofundum sp. MAR08-339	72.7	213
<input type="checkbox"/>	650246965	SSU ribosomal protein S20E	Ahos_0754	20, 82	646649301	SSU ribosomal protein S20E	Aboo_1237	7, 69	Aciduliprofundum boonei T469	76.2	101
<input type="checkbox"/>	650246965	SSU ribosomal protein S20E	Ahos_0754	20, 82	2509055123	SSU ribosomal protein S20E	AcM339_1329	7, 69	Aciduliprofundum sp. MAR08-339	76.2	101

Genome Gene Best Homologs

Percent Identity: 60+

Sequencing Status: Finished Domain: Archaea

☒ List ☐ Tree Selected: 1

Search for: <enter a genome name to search>

- Acidianus hospitalis W1 (A) [F]
- Acidilobus saccharovorans 345-15 (A) [F]
- Aciduliprofundum boonei T469 (A) [F]
- Aciduliprofundum sp. MAR08-339 (A) [F]
- Aeropyrum camini SY1, JCM 12091 (A) [F]
- Archaeoglobus fulgidus DSM 8774 (A) [F]
- Archaeoglobus fulgidus VC-16, DSM 4304 (A) [F]
- Archaeoglobus profundus Av18, DSM 5631 (A) [F]
- Archaeoglobus sulfatocaldus PM70-1, DSM 19444 (Asulf_version1) (A) [I]
- Archaeoglobus veneficus SNP6, DSM 11195 (A) [F]
- Aciduliprofundum boonei T469 (A) [F]**
- Calditoga magallanensis IC-167 (A) [F]
- Candidatus Korarchaeum cryptofilum OPF8 (A) [F]
- Candidatus Methanomassiliicoccus intestinalis Isoire-Mc1 (A) [F]
- Candidatus Methanomethylophilus alvus Mc1201 (A) [F]
- Candidatus Methanoplasma termitum Mgt1 (A) [F]
- Candidatus Nitrososphaera esaeque G61 (A) [F]
- Candidatus Nitrosopelagicus brevis CN25 (A) [F]
- Candidatus Nitrosopumilus adriaticus NFS (A) [F]
- Candidatus Nitrosopumilus koreensis AR1 (A) [F]
- Candidatus Nitrosopumilus piranensis DJC (A) [F]
- Candidatus Nitrosopumilus sediminis AR2 (A) [F]
- Candidatus Nitrososphaera evergladensis SR1 (A) [F]
- Candidatus Nitrososphaera gargensis Ga9-2 (A) [F]
- Cenarchaeum symbiosum A (A) [F]

Selected Genomes

Reference Genome: Acidianus hospitalis W1 (A) [F]

Query Genomes (50 max): 2

- Aciduliprofundum boonei T469 (A) [F]
- Aciduliprofundum sp. MAR08-339 (A) [F]

Excluded Genomes: 1

- Caldisphaera lagunensis DSM 15908 (A) [F]

Figure 1. Genome Gene Best Homologs.

Users can select genes in the result page to be added to the Gene Cart for further analysis.

Reference genome and genes, as well as query genome(s) and genes can be examined following the corresponding hyperlinks in the result page.